UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/564,196	06/20/2006	Craig Rochford	66455-264-7	7497

25269 7590 09/25/2007

DYKEMA GOSSETT PLLC
FRANKLIN SQUARE, THIRD FLOOR WEST
1300 I STREET, NW
WASHINGTON, DC 20005

EXAMINER	
SOON, SHELDON STEWART	

ART UNIT	PAPER NUMBER
2841	

MAIL DATE	DELIVERY MODE
09/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/564,196	ROCHFORD ET AL.	
	Examiner	Art Unit	
	Sheldon S. Soon	2841	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 June 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *12/12/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

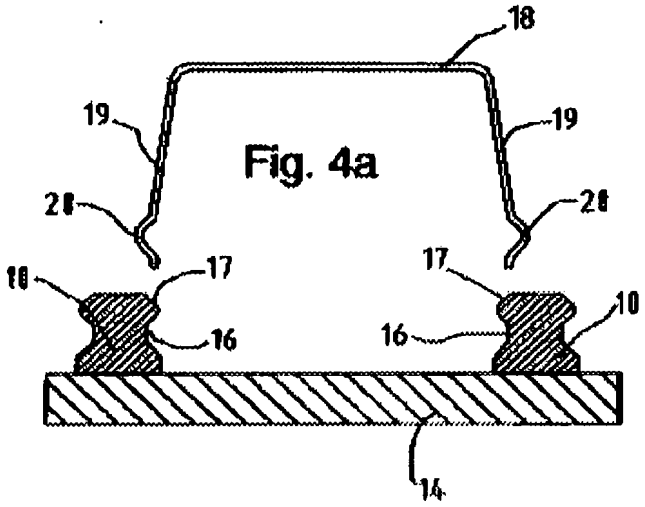
1. Claim 3 is objected to because of the following informalities: the second line of the claim states, "first and second surfaces are provided on the or each slug". Appropriate correction is required. The examiner will interpret the line to read, "first and second surfaces are provided on the component or each slug".

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kauhaiemi et al (WIPO Pub WO 97/41716) herein referred to as Kauhaiemi in view of Shlyakhtichman et al (US PG Pub 2002/0185294) herein referred to as Shlyakhtichman.



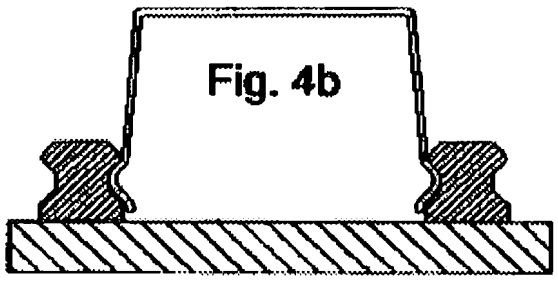


Figure 4 from Kauhaiemi

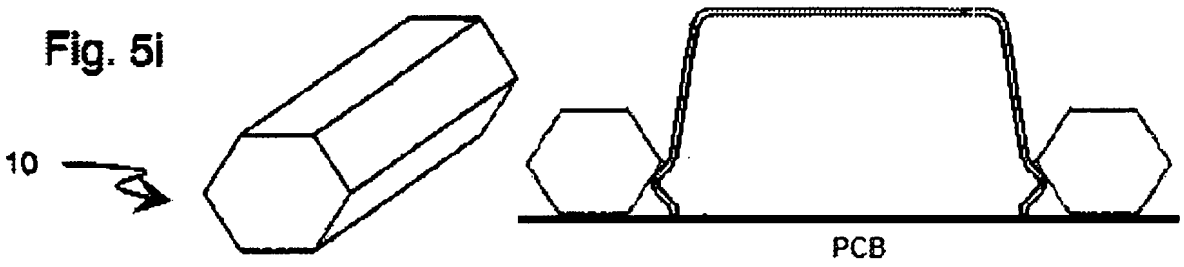


Figure 5i from Kauhaiemi, additional drawing from examiner

FIG. 1

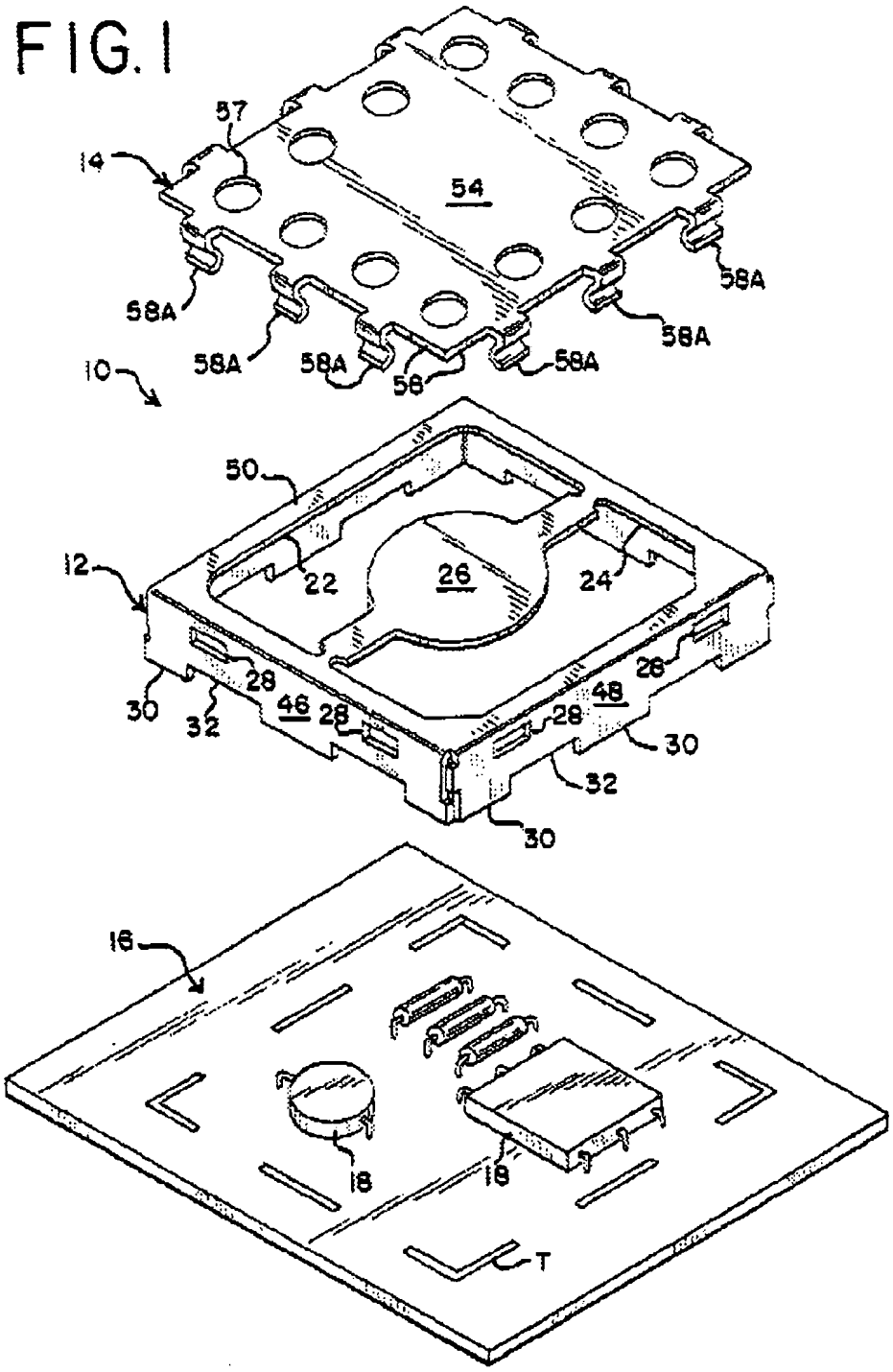


Figure 1 from Shlyakhtichman

Regarding claim 1 – Kauhaiemi discloses the following elements of the instant invention: a PCB (item 14) and a component (item 18) mounted thereon, wherein the PCB and component are releasably secured to one another by securing means (items 10 and 28), the securing means comprising a resiliently flexible and sprung biased clip (item 28) member secured to the component; and at least one slug (item 10) secured to the PCB and being originally discrete from the PCB and the component, but fails to disclose the component comprises an aperture for receiving a slug, and wherein the clip member is arranged to abut the slug received by the aperture. Shlyakhtichman teaches the use of a shield assembly with spring fingers (items 58 A) that receive the attachments means on the inner portion of the fingers, thus creating the aperture inside. It would have been obvious to someone skilled in the art at the time of the invention to use the spring fingers of Shlyakhtichman on the metallic shield of Kauhaiemi since placing the attachment means under the metallic shield will protect the attachment means being fouled from foreign particles and grime as well as protecting them from getting caught or torn off

Regarding claim 2 - Kauhaiemi in view of Shlyakhtichman discloses all the elements of claim 1 of the instant invention and further discloses the slug has a cross-section taken perpendicular to the longitudinal axis of the slug which is quadrilateral, pentagonal, hexagonal, septagonal or octagonal in shape. The attachment means shown in figure 5i is hexagonal.

Regarding claim 3 - Kauhaiemi in view of Shlyakhtichman discloses all the elements of claim 2 of the instant invention and further discloses first and second surfaces are

provided on the component or each slug, the first surface (outer surface of item 28) being arranged to cam and thereby resiliently flex the clip member in a first direction (inwards) against the bias of the clip member when the PCB and the component are initially pressed together during assembly, and the second surface (locking groove, item 16) being arranged so as to allow the clip member to move, by means of the bias, in a second direction (outwards) opposite to the first direction when the PCB and the component are further pressed together, the clip member thereby latching on the second surface so as to provide resistance to the PCB and the component being disassembled.

Regarding claim 4 - Kauhaiemi in view of Shlyakhtichman discloses all the elements of claim 3 of the instant invention and further discloses the PCB and the component are secured to one another so that the clip member is sprung biased into abutment with the second surface. Page 9 lines 4-5 disclose, " the component 28 snaps into the locking groove 16".

Regarding claim 5 - Kauhaiemi in view of Shlyakhtichman discloses all the elements of claim 4 of the instant invention and further discloses the second surface is disposed at such an angle relative to the clip member that the spring bias of the clip member biases the PCB and the component toward one another when the PCB and the component are in abutment with one another. As shown in figure 5i, the spring clip is abutted against the cam portion of the hexagonal attachment element. Such an arrangement will inherently cause the shield to slide down along the attachment element and abut with the PCB as shown.

Regarding claim 6 - Kauhaiemi in view of Shlyakhtichman discloses all the elements of claim 1 of the instant invention and further discloses the securing means comprises a further resiliently flexible and sprung biased clip member (item 28) secured to the component, the further clip member being located so that the spring bias of the two clip members acts generally in a direction opposite to each other. The two clip members push outward, away from each other.

Regarding claim 7 - Kauhaiemi in view of Shlyakhtichman discloses all the elements of claim 6 of the instant invention but fails to disclose the clip members are located substantially opposite one another so that the spring bias of each clip member acts generally in the direction of the other clip member. Shlyakhtichman teaches the use of a shield assembly with spring fingers (items 58 A) that receive the attachments means on the inside and act with a force inwards, towards the opposite finger. It would have been obvious to someone skilled in the art at the time of the invention to use the spring fingers of Shlyakhtichman on the metallic shield of Kauhaiemi since placing the attachment means under the metallic shield will protect the attachment means being fouled from foreign particles and grime as well as protecting them from getting caught or torn off.

Regarding claim 8 - Kauhaiemi in view of Shlyakhtichman discloses all the elements of claim 1 of the instant invention and further discloses the or each clip member is secured to the component by virtue of the or each clip member being cut from the material of the component. Page 4 lines 15-16 disclose, " projections or indentations and which correspond in their shape to a preformed area of the attachment means".

Regarding claim 9 - Kauhaiemi in view of Shlyakhtichman discloses all the elements of claim 1 of the instant invention and further discloses the component is a radio frequency interferences shield. The abstract discloses the prior art of Kauhaiemi to be an EMC shield.

Conclusion

3. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Fan	US Patent 6,377472
Cassarly et al	US Patent 4,433,886
Kolb et al	US PG Pub 2002/0129971
Farnworth et al	US PG Pub 2003/0106209
West	US Patent 6,949,706
Ziberna	US PG Pub 2006/0084289
Kim et al	US PG Pub 2004/0075982
Honeycutt	US Patent 6,320,121
Seidler	US PG Pub 2004/0240192
Matuszewski et al	US Patent 5,633,786
Robinson et al	US PG Pub 2002/0123265
Sosnowski	US Patent 6,136,131

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheldon S. Soon whose telephone number is 571-272-9092. The examiner can normally be reached on Monday through Friday 8:30-5:00 est.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean A. Reichard can be reached on 571-272-2800, ex. 31. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Sheldon S Soon
Examiner
Art Unit 2841

SSS

DEAN A. REICHARD
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800 9/17/07